

## SIX NEW CHINESE MEMBRACIDÆ

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Despite the unfavorable conditions for scientific work which now exist in China, the writer has continued to receive material from collectors in that country during the past two years.

This material has yielded six new species of Membracidæ which are here described and figured as follows:

1. *Tricentrus obesus* sp. nov. (Fig. 1).

Large, robust, heavy-bodied, black, punctate, pubescent; suprahumeral heavy, curved, extending outward and upward; posterior process short, heavy, blunt, tectiform; tegmina uniformly bronze-brown with a white band showing through basal third; undersurface black.

*Technical description:*

Head subquadrate, wider than long, black, finely punctate, short golden pubescence; base elevated and sinuate; eyes mottled brown and gray; ocelli small, pearly, inconspicuous, equidistant from each other and from the eyes and situated slightly above a line drawn through centers of eyes; inferior margins of genæ rounded; clypeus twice as long as broad with a weak lobe on each side at base, extending for half its length below inferior margins of genæ, tip broadly truncate.

Pronotum black, finely punctate, sparingly pubescent with short golden hairs; metopidium broader than high, almost vertical above the head; median carina strongly percurrent; humeral angles heavy, triangular and blunt; suprahumeral horns heavy, swollen, about as long as the distance between their bases, extending outward and upward, anterior margins curved, tips blunt; posterior process short, heavy, tricarinate, tectiform, tip blunt and extending just to internal angles of tegmina; scutellum well exposed on each side.

Tegmina dark bronze-brown; base coriaceous, punctate and pubescent; a broad white patch just posterior to the coriaceous portion showing through a hyaline area; tips blunt; apical limb very narrow; five apical and two discoidal cells.

Undersurface of body black; legs simple, femora black, tibiæ dark brown, tarsi light brown; posterior trochanters armed with teeth.

Length from front of head to tips of tegmina 7.6 mm.; width between tips of suprahumeral 5.2 mm.

Type: female.

Described from five specimens, all females, one collected at Wong Sa Shui, S. Klangai, on July 8, 1936, three from Liung-

Chon San, S. W. Funien, taken July 21, 1936, and one from Kwangtung collected July 13, 1934. Type and four paratypes in author's collection.

This species resembles *T. samai* Funkh., another Chinese species, but is larger and differs in the size and shape of the suprahumeral.

2. *Tricentrus purpureus* sp. nov. (Fig. 2).

Large, robust, purplish-black, punctate, pubescent; suprahumeral short, blunt, extending directly outward; posterior process heavy, acute, extending just beyond internal angles of tegmina; tegmina bronze-hyaline with base opaque black and punctate and with a large white spot just behind the base; undersurface black.

*Technical description:*

Head subquadrate, twice as broad as high, purplish-black, finely punctate, densely pubescent; base weakly arcuate; eyes reddish; ocelli large, amber-colored, equidistant from each other and from the eyes and situated well above a line drawn through centers of eyes; inferior margins of genæ sinuate, flanged and projecting slightly cephalad; clypeus extending for half its length below inferior margins of genæ, tip blunt and rounded.

Pronotum purplish-black, coarsely punctate, sparingly pubescent; metopidium broader than high, almost vertical above the head; median carina faintly percurrent; suprahumeral horns short, blunt, triquerate, about one-fourth as long as the distance between their bases, extending directly outward; posterior process heavy, tectiform, tricarinate, tip acute and reaching to a point just beyond internal angles of tegmina; scutellum well exposed on each side.

Tegmina bronze-hyaline; veins strong; base opaque, coriaceous and punctate; a large white spot showing through tegmina just behind coriaceous base; apical limb broad; five apical and two discoidal cells.

Undersurface black; legs simple; femora, tibiae and tarsi black; hind trochanters armed with spines.

Length from front of head to tips of tegmina 8 mm.; width between tips of suprahumeral 4.7 mm.

Type: female.

Described from a single specimen taken on Cheung-chow Island near Hong Kong on May 9, 1940 by F. KoTo. Type in author's collection.

This species is near *T. fulgidus* Funkh., but differs in being dull and punctate instead of smooth and shining.

3. *Tricentrus taurus* sp. nov. (Fig. 3).

Small, brown, punctate, very sparingly pubescent; suprahumeral small, sharp, spike-like, extending forward and outward; posterior process heavy,

weakly sinuate, tectiform, acuminate, extending well beyond internal angles of tegmina; tegmina uniformly light brown, wrinkled, translucent; under-surface brown.

*Technical description:*

Head subquadrate, roughly sculptured, black, finely punctate, sparingly pubescent with short golden hairs; base highly arcuate and weakly sinuate; eyes mottled light brown and dark brown; ocelli amber-colored, a little farther from each other than from the eyes and situated well above a line drawn through centers of eyes; inferior margins of genæ rounded; clypeus extending for half its length below inferior margins of genæ, tip rounded and pilose.

Pronotum golden brown, finely punctate, weakly pubescent; metopidium broader than high, a large black callosity above each eye; median carina weakly percurrent; humeral angles large, triangular and blunt; suprahumeral horns small, spike-like, triquerate, about as long as the distance between their bases, extending outward and forward, tips sharp; posterior process robust, tectiform, slightly arcuate above dorsal line of pronotum, tip acuminate and extending well beyond internal angles of tegmina; scutellum widely exposed on each side.

Tegmina light brown, wrinkled, translucent; base narrowly opaque, coriaceous, punctate and pubescent; veins weak; apical limb narrow; five apical and two discoidal cells.

Undersurface of body brown; legs simple; femora, tibiæ and tarsi light brown; tibiæ pilose; hind trochanters bearing small teeth on inner surface.

Length from front of head to tips of tegmina 4.8 mm.; width between tips of suprahumeral 3.5 mm.

Type: female.

Described from a single specimen collected by Mr. L. Gressitt on July 27, 1938 at Gang-kou, Southwest Fuklen in South China. Type in author's collection.

4. *Gargara nodulata* sp. nov. (Fig. 4).

Small, black, punctate, pubescent; eyes white; posterior process short and strongly sinuate; tegmina hyaline with bases broadly black, a brown band before apex and with the veins decorated with large nodules; undersurface black; legs brown.

*Technical description:*

Head subquadrate, black, shining, finely punctate, sparingly pubescent; base highly sinuate and arcuate; eyes white, transparent; ocelli amber-colored, twice as far from each other as from the eyes and situated well above a line drawn through centers of eyes: inferior margins of genæ straight; clypeus broad, extending for half its length below inferior margins of genæ, tip broadly rounded.

Pronotum black, finely punctate, weakly pubescent; metopidium broader than high, sloping above the head; humeral angles large, blunt, triangular;

no suprahumeral; median carina faintly percurrent; posterior process short, heavy, blunt, strongly sinuate, not reaching the apical angles of tegmina; scutellum well exposed on each side.

Tegmina hyaline; base broadly opaque, black and punctate; a brown transverse band before apex; veins bearing large tubercular nodules; apical limbus well developed; five apical and two discoidal cells.

Undersurface of body black; legs uniformly brown; hind trochanters unarmed.

Length from front of head to tips of tegmina 3.6 mm.; width between humeral angles 1.8 mm.

Type: male.

Described from two males, both collected by L. Gressitt at Tai-yong, East Kwantung, China, on August 5, 1936. Type and paratype in author's collection.

The tegmina of this species are similar to those of *G. nodipennis* Funkh., but the insects are entirely different in the size and shape of the pronotum.

5. *Gargara gressitti* (Fig. 5).

Brown, punctate, pubescent; eyes yellow; posterior process strong, arcuate, tectiform, reaching just to internal angles of tegmina; tegmina uniformly clouded hyaline with base narrowly brown and punctate; undersurface and legs brown.

*Technical description:*

Head subquadrate, black, punctate, pubescent; base highly arcuate and weakly sinuate; eyes yellow; ocelli pearly, a little farther from each other than from the eyes and situated slightly above a line drawn through centers of eyes; inferior margins of genæ rounded; clypeus broad, deflexed, extending for half its length below inferior margins of genæ, tip rounded and pilose.

Pronotum brown, finely punctate, sparingly pubescent with short golden hairs; metopidium broader than high, nearly vertical above the head, much darker in color next to the head, black lateral callosities above eyes; humeral angles broad, triangular, blunt; median carina strongly percurrent; no suprahumeral; posterior process heavy, tectiform, tricarinate, tip acute and just reaching internal angles of tegmina; scutellum well exposed on each side.

Tegmina uniformly clouded hyaline; base narrowly brown, coriaceous and punctate; veins strongly pilose; apical limbus narrow; five apical and two discoidal cells.

Undersurface of body dark brown; legs simple, light brown; hind trochanters unarmed.

Length from front of head to tips of tegmina 5.3 mm.; width between humeral angles 2.5 mm.

Type: female.

Described from a single specimen collected at Hong San, South-east Kiangai, China, by Mr. L. Gressitt on July 25, 1936. Type in author's collection.

6. *Gargara tonkini* sp. nov. (Fig. 6).

Very small; head black; pronotum golden brown, punctate, pubescent; eyes yellow; posterior process slender, triquerate, extending just to internal angles of tegmina; tegmina hyaline, base narrowly brown and coriaceous, a brown transverse band across middle, veins white; undersurface of body dark brown; legs light brown.

*Technical description:*

Head subquadrate, black, finely punctate, densely pubescent with golden hairs; base weakly arcuate and sinuate; eyes yellow; ocelli large, pearly, conspicuous, farther from each other than from the eyes and situated well above a line drawn through centers of eyes; inferior margins of genæ rounded; clypeus broad, black, extending for half its length below inferior margins of genæ, tip rounded and pilose.

Pronotum bright golden brown, finely punctate, pubescent with long golden hairs; metopidium broader than high, rounded above the head, uniformly golden brown; humeral angles heavy, triangular, blunt; no supra-humerals; median carina obsolete; posterior process slender, triquerate, tectiform, concolorous brown, tip sharp and just reaching internal angles of tegmina; scutellum broadly exposed on each side.

Tegmina hyaline; base narrowly brown, coriaceous and punctate; a brown transverse fascia across middle; veins strong, white and sparingly pilose; apical limbus narrow; five apical and two discoidal cells.

Sides of thorax and undersurface of body dark brown; legs simple, light brown; hind trochanters unarmed.

Length from front of head to tips of tegmina 3.5 mm.; width between humeral angles 1.8 mm.

Type: female.

Described from two specimens, both females and both taken at Tonkin, Indo-China, in 1937 by A. de Cooman. Type and paratype in author's collection.

This species is close to *G. flavipes* Funkh., a small black form also from southern China and Indo-China.

## PLATE VII

- Figure 1. *Tricentrus obesus* sp. nov.  
Figure 2. *Tricentrus purpureus* sp. nov.  
Figure 3. *Tricentrus taurus* sp. nov.  
Figure 4. *Gargara nodulata* sp. nov.  
Figure 5. *Gargara gressitti* sp. nov.  
Figure 6. *Gargara tonkini* sp. nov.



